

Work Plan

Evaluation of the Potential Impacts to the ROD-Selected Remedy from a Possible Subsurface Smoldering Event

Introduction

In a July 3, 2013 letter, the Environmental Protection Agency (EPA) requested the West Lake Landfill Operable Unit-1 (OU-1) Respondents expand the risk analysis section of the Supplemental Feasibility Study [SFS] (EMSI, 2011) to include risks associated with a subsurface smoldering event ("SSE") reaching OU-1 from the Bridgeton Landfill portion of OU-2, or a new SSE originating within OU-1. EPA indicated that it wants a qualitative assessment that takes into account how the remedy design would address the presence of an SSE, should one occur.

Approach

Per EPA's direction, evaluation of the potential impacts of an SSE on the Record of Decision (ROD)-selected remedy will be performed in a qualitative manner. Therefore, the evaluation will be based on review of published scientific and regulatory agency literature and an understanding of basic scientific principals and processes. This evaluation will include identification of additional ARARs, an assessment of potential impacts on the radionuclides present in OU-1, and the possible consequences to the integrity or performance of the ROD-selected remedy.

The evaluation will address the following items:

1. Discussion of a subsurface smoldering event that could result in an accumulation of increased heat within the landfill mass;
2. Description of the ROD-selected remedy;
3. Identification of possible SSE-related ARARs; and
4. Description of potential changes in the physical or chemical conditions within the landfill mass as a result of an SSE and the possible impacts of such changes on:
 - a. The release, emission or migration of radionuclides in OU-1 Areas 1 and 2 after implementation of the ROD-selected remedy; and
 - b. The integrity or performance of the ROD-selected remedy in such a circumstance.

Deliverables

1. Interim Deliverable – A memorandum will be prepared summarizing the results of the evaluation of potential impacts of an SSE on the ROD-selected remedy for OU-1 and any additional ARARs that could be implicated after construction of the ROD-selected remedy.
2. SFS revisions – an evaluation of the long-term effectiveness and permanence of the ROD-selected remedy, specifically, the evaluation of the adequacy and reliability of controls will be updated to include the potential impacts of an SSE at the Site and any ARARs raised by such an event.

Schedule

It is anticipated that collecting available information on SSEs, evaluating potential impacts of an SSE on the ROD-selected remedy, reviewing potential additional ARARs, and preparing a summary memorandum will take approximately six weeks after receipt of EPA approval of this work plan. (Please note this schedule may be revised depending upon the status of other activities simultaneously requested by EPA.)

EMSI will prepare a Supplemental SFS report that includes the results of the SSE evaluations after EPA comments on the interim SSE deliverable and as part of a comprehensive Supplemental SFS which addresses the results of the various other additional tasks EPA has requested.

References

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